UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,085	11/26/2003	Joseph S. Glider	ARC920030081US1	7870

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EXAMINER
WEI, ZHENG

ART UNIT	PAPER NUMBER
2192	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/723,085	GLIDER ET AL.
	Examiner	Art Unit	
	Zheng Wei	2192	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _18 May 2007 and 05 June 2007_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-5,7-11,13 and 15-19_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-5,7-11,13 and 15-19_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _26 November 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Remarks

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/05/2007 has been entered.

2. This office action is in response to the amendment filed on 05/18/2007.

3. Claims 1, 7, 13 and 15 have been amended.

4. Claims 1-5, 7-11, 13, and 15-19 remain pending and have been examined.

Specification

5. The new paragraph, filed on 12/12/2006 to replace the paragraph [0038] on page 14, lines 4-11 of the specification, is accepted by Examiner and the new specification paragraph is entered.

Response to Arguments

6. Applicant's arguments filed on 05/18/2007, in particular on pages 9-12, have been fully considered and are persuasive.

- At page 9, the Applicant's argument is persuasive. The substitute paragraph

  [0038] corresponding to page 14, lines 4-11 of the specification is accepted

  by Examiner and is entered;

- At page 11, second paragraph, the Applicant points out that neither Moore

  nor Sinander teaches the newly added feature of performing nodes

  upgrade/downgrade processes without system downtime in the amended

  claims 1, 7, 13 and 15. Therefore, a new ground of rejection is applied.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

8.   Claim 1-5, 7-11, 13 and 15-19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over <u>Moore</u> (Moore et al., US 2003/0092438) in the view of

<u>Sinander</u> (Niklas Sinander, US 6,385,770 B1) in further view of <u>Schroder</u>

(Schroder et al., US 7,107,329 B1)

<u>Claim 1, 7,13 and 15</u>:

Moore discloses a method and apparatus for revising a software application used by aplurality of nodes in a computer network, wherein said software aplication utilizes persistent data, siad method comprisong:

- Applying an upgrade to a next level of software (see for example, Fig.4, step 118-120, UPGRADE and related text)

- Converting all persistent data structures to new version format (see for example, Fig.4, step 120 CONVERT STAE DATA TO NEW VERSION FORMAT and related text)

- Applying a downgrade to a previous level of software. (see for example, Fig.3, items 102 and related text)

- Converting all persistent data structures into the old persistent data structure format. (see for example Fig.3, item 112 and related text)

- Applying a downgrade to a second previous level of software that understands said old persistent data structure formats. (Fig.4, items 116-122)

But does not disclose two-level software upgrade. However, Sinander in the same analogous art of software upgrade discloses a method and system for upgrading a software application utilizes all kinds of data, said method and system comprising:

- Applying an upgrade to a first part of an upgrade framework to upgrade system software; (Col 3, Lines 54-58)

- Executing a plurality of upgrade contents to convert data structure; (Col2, Lines 6-16)

- Applying an upgrade to a second part of the upgrade frame to upgrade system software; (Col 3, Lines 54-58)

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Sinander's upgrade method combine with Moore's software upgrade/downgrade method. One would have been motivated to integrate Sinander's upgrade method to Moore's upgrade method

as suggested by <u>Sinander</u> (see for example, ABSTRACT, "The invention allows to upgrade a software system in a real-time environment using a source system operating with an old software version and a target system for operating with the new software version and allows to handle static as well as dynamic data").

<u>But</u> neither of them further discloses both upgrade processes and both downgrade processed occur without disruption of communication between said nodes. However, <u>Schroder</u> in the same analogous art of upgrading software of network nodes discloses a method for updating routers (nodes) software in network without traffic interruption (see for example, Fig.1B, the upgrade process by using "hot swap" implementation, "Before Upgrade", During Upgrade", "After Upgrade" and related text).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use <u>Moore</u> and <u>Sinander</u>'s method to prepare new software information including revisions and upgrades as address above and further use <u>Schroder</u>'s method to swap the original and upgraded software in the node without service disruption. One would have been motivated to do so to support network node software/firmware upgrade without traffic interruption as suggested by <u>Schroder</u> (see for example, col.2, lines 18-24, "after such preparing of the new software information, swapping the same for the original software data routing along said path without interruption, and imperceptibly to all the other router nodes in the router system")

<u>Claim 2, 8 and 16</u>:

<u>Sinander</u>, <u>Moore</u> and <u>Schroder</u> disclose a system and method to upgrade software application utilizes persistent data as in claims 1, 7, and 15 above, but does not explicitly disclose that the persistent data sructures comprise communication packet structures. However, <u>Sinander</u> further discloses the system and method for software upgrade could be used in a real time

applications of telecommunicaitons network (Col1, Line41-44) and switch communication links (Col2, Line36). That would have been obvious to one having ordinary skill in the art at time the invention was made to undersand that these networks, like ATM, IP networks use packet (ATM cells or IP packet) for communication based on different kinds of network protocols. Therefore, one would have been motivated to use persistent data structure to represent the packet structure in software programming in order to make software implementation simpler and easier.

Claim 3, 9 and 17:

Sinander, Moore and Schroder disclose a system and method to upgrade software application as in claims 2, 8 and 16 above and Sinander further discloses that the distributed system including a plurality of nodes (Co.10, lines 47-50, "In case the source system is operating a mobile telephone network, the devices may be mobile telephones or nodes of the network.") holding non-volatile memory data structure. (Col.6, lines 36-48),

Claims 4, 10 and 18:

Sinander, Moore and Schroder disclose a system and method to upgrade software application as in claims 3, 9 and 17 above and Sinander also discloses that said nodes communicate with one another. (Col.10, lines 47-50, "In case the source system is operating a mobile telephone network, the devices may be mobile telephones or nodes of the network."). Therefore, it is obvious for a person with ordinary skill in the art at time the invention was made to understand that the "mobile telephone or nodes of the network" can communicate to each other.

Claims 5, 11 and 19:

Sinander, Moore and Schroder disclose a system and method to upgrade software application as in claims 4, 10 and 18 above and Sinander further

discloses that said nodes communicate with one another. (Col.10, lines 47-50, "In case the source system is operating a mobile telephone network, the devices may be mobile telephones or nodes of the network."). Therefore, it would have been obvious to one having ordinary skill in the art at time the invention was made to understand that said nodes, like mobile telephones or nodes in networks can use communication packet to communicate between each other.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

- Gard et al., (US 6,347,396 B1) discloses a method for disturbance free update of data

- Nilsson et al. (US 5,410,703) discloses a method and system for changing software during computer operation

- Scholtens et al., (US 2003/0005426 A1) discloses a method for managing an upgrade on a system.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059 and Fax number is (571) 270-2059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZW

TUAN DAM
SUPERVISORY PATENT EXAMINER